

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended): A data duplicating method that connects a first
2 information processing system comprised of a first host computer and a first storage device and
3 at least one second information processing system comprised of a second host computer and a
4 second storage device through a data transfer path and holds the same data in duplicate in said
5 first and second information processing systems by copying first update data generated in said
6 first information processing system to said second information processing system,
7 wherein said second information processing system ~~possesses~~generates
8 difference control information for identifying second update data generated in said second
9 information processing system ~~that takes over and executes a process of~~after taking over
10 processing performed by said first information processing system when said first information
11 processing system stops operating, and after resumption of operation of said first information
12 processing system, said second update data is selectively copied to said first information
13 processing system on the basis of said difference control information.

1 2. (Original): A data duplicating method according to claim 1, wherein said
2 difference control information is a bit map that indicates the presence or absence of completion
3 of data duplication of said first and second update data at a plurality of individual units of data
4 storage in each of said first and second storage devices.

1 3. (Currently amended): A data duplicating method that connects a first
2 information processing system comprised of a first host computer and a first storage device and
3 at least one second information processing system comprised of a second host computer and a
4 second storage device through a data transfer path and holds the same data in duplicate in said
5 first and second information processing systems by asynchronously copying first update data
6 generated in said first information processing system to said second information processing

7 system and having, in said first information processing system, first difference control
8 information for identifying said first update data not copied to said second information
9 processing system,

10 wherein said second information processing system ~~possesses~~creates second
11 difference control information for identifying second update data generated in said second
12 information processing system ~~that takes over and executes a process of~~after taking over
13 processing performed by said first information processing system when said first information
14 processing system stops operating, and after resumption of operation of said first information
15 processing system, data in a range specified by said first and second difference control
16 information is selectively copied to said first information processing system.

1 4. (Original): A data duplicating method according to claim 3, wherein said
2 first and second difference control information are a bit map that indicates the presence or
3 absence of completion of data duplication of said first and second update data at a plurality of
4 individual units of data storage in each of said first and second storage devices.

1 5. (Currently amended): A data duplicating method that connects a first
2 information processing system comprised of a first host computer and a first storage device and
3 at least one second information processing system comprised of a second host computer and a
4 second storage device through a data transfer path and holds the same data in duplicate in said
5 first and second information processing systems by asynchronously copying first update data
6 generated in said first information processing system to said second information processing
7 system and having, in said first information processing system, first difference control
8 information for identifying said first update data not copied to said second information
9 processing system,

10 wherein said second information processing system ~~possesses~~produces second
11 difference control information for identifying second update data generated in said second
12 information processing system ~~that takes over and executes a process of~~after taking over
13 processing performed by said first information processing system when said first information
14 processing system stops operating, and after resumption of operation of said first information

15 processing system, said second update data is selectively copied to said first information
16 processing system on the basis of said second difference control information.

1 6. (Original): A data duplicating method according to claim 5, wherein said
2 first and second difference control information are a bit map that indicates the presence or
3 absence of completion of data duplication of said first and second update data at a plurality of
4 individual units of data storage in each of said first and second storage device.

1 7. (Currently amended): A data duplicating method that connects a first
2 information processing system comprised of a first host computer and a first storage device and
3 at least one second information processing system comprised of a second host computer and a
4 second storage device through a data transfer path and constantly holds the same data in
5 duplicate in said first and second information processing systems by synchronously copying first
6 update data generated in said first information processing system to said second information
7 processing system,
8 wherein said second information processing system ~~possesses~~ generates second
9 difference control information for identifying second update data generated in said second
10 information processing system ~~that takes over and executes a process of subsequent to taking~~
11 over processing performed by said first information processing system when said first
12 information processing system stops operating, and after resumption of operation of said first
13 information processing system, said second update data is selectively copied to said first
14 information processing system on the basis of said second difference control information.

1 8. (Original): A data duplicating method according to claim 7, wherein said
2 second difference control information is a bit map that indicates the presence or absence of
3 completion of data duplication at a plurality of individual units of data storage in each of said
4 first and second storage devices.

1 9. (Currently amended): A data duplicating system comprising a first
2 information processing system comprised of a first host computer and a first storage device, at

3 least one second information processing system comprised of a second host computer and a
4 second storage device and a data transfer path through which data transfer between said first and
5 second information processing systems is carried out, whereby said data duplicating system
6 holds the same data in duplicate in said first and second information processing systems by
7 copying first update data generated in said first information processing system to said second
8 information processing system through said data transfer path,

9 wherein said second information processing system ~~includes~~ creates difference
10 control information for identifying second update data generated in said second information
11 processing system ~~while taking over and executing a process of~~ subsequent to taking over
12 processing performed by said first information processing system when said first information
13 processing system is disabled to operate, and the function to selectively copy said second update
14 data of said second information processing system to said first information processing system on
15 the basis of said difference control information when said first information processing system is
16 enabled to operate.

1 10. (Original): A data duplicating system according to claim 9, wherein said
2 difference control information is a bit map that indicates the presence or absence of completion
3 of duplication of said first and second update data at a plurality of units of data storage in each of
4 said first and second storage devices.

1 11. (Currently amended): A data duplicating system comprising a first
2 information processing system comprised of a first host computer and a first storage device, at
3 least one second information processing system comprised of a second host computer and a
4 second storage device and a data transfer path through which data transfer between said first and
5 second information processing systems is carried out, whereby said data duplicating system
6 holds the same data in duplicate in said first and second information processing systems by
7 asynchronously copying first update data generated in said first information processing system to
8 said second information processing system through said data transfer path,

9 wherein said first information processing system ~~includes~~produces first
10 difference control information for identifying said first update data not copied to said second
11 information processing system; and
12 said second information processing system ~~includes~~produces second difference
13 control information for identifying second update data generated in said second information
14 processing system ~~while taking over and executing a process of~~subsequent to taking over
15 processing performed by said first information processing system when said first information
16 processing system is disabled to operate, and the function to selectively copy data in a range
17 specified by said first and second difference control information to said first information
18 processing system when said first information processing system is enabled to operate.

1 12. (Original): A data duplicating system according to claim 11, wherein said
2 first and second difference control information are a bit map that indicates the presence or
3 absence of completion of data duplication of said first and second update data at a plurality of
4 units of data storage in each of said first and second storage devices.

1 13. (Currently amended): A data duplicating system comprising a first
2 information processing system comprised of a first host computer and a first storage device, at
3 least one second information processing system comprised of a second host computer and a
4 second storage device and a data transfer path through which data transfer between said first and
5 second information processing systems is carried out, whereby said data duplicating system
6 holds the same data in duplicate in said first and second information processing systems by
7 asynchronously copying first update data generated in said first information processing system to
8 said second information processing system through said data transfer path,

9 wherein said first information processing system ~~includes~~generates first
10 difference control information for identifying said first update data not copied to said second
11 information processing system; and
12 said second information processing system ~~includes~~generates second difference
13 control information for identifying second update data generated in said second information
14 processing system ~~while taking over and executing a process of~~subsequent to taking over

15 processing performed by said first information processing system when said first information
16 processing system is disabled to operate, and the function to selectively copy said second update
17 data of said second information processing system to said first information processing system on
18 the basis of said second difference control information when said first information processing
19 system is enabled to operate.

1 14. (Original): A data duplicating system according to claim 13, wherein said
2 first and second difference control information are a bit map that indicates the presence or
3 absence of completion of data duplication of said first and second update data at a plurality of
4 units of data storage in each of said first and second storage devices.

1 15. (Currently amended): A data duplicating system comprising a first
2 information processing system comprised of a first host computer and a first storage device, at
3 least one second information processing system comprised of a second host computer and a
4 second storage device and a data transfer path through which data transfer between said first and
5 second information processing systems is carried out, whereby said data duplicating system
6 holds the same data in duplicate in said first and second information processing systems by
7 synchronously copying first update data generated in said first information processing system to
8 said second information processing system through said data transfer path,
9 wherein said second information processing system ~~includes second~~generates
10 difference control information for identifying second update data generated in said second
11 information processing system ~~while taking over and executing a process of subsequent to taking~~
12 over processing performed by said first information processing system when said first
13 information processing system is disabled to operate, and the function to selectively copy data in
14 a range specified by said ~~second~~ difference control information to said first information
15 processing system when said first information system is enabled to operate.

1 16. (Original): A data duplicating system according to claim 15, wherein said
2 second difference control information is a bit map that indicates the presence or absence of

Appl. No. 09/886,226

Amdt. sent February 24, 2005

Reply to Office Action of October 5, 2004

PATENT

- 3 completion of data duplication of said first and second update data at a plurality of units of data
- 4 storage in each of said first and second storage devices.